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GAO

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General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division

B-240400

September 26, 1990

The Honorable Sam Nunn
Chairman, Committee on Armed
Services
United States Senate

Dear Mr. Chairman:

Since fiscal year 1985, defense appropriations acts have included provisions for competition between public and private shipyards for a portion of the Navy's depot level ship maintenance and modernization work. In a March 1988 report,[1] we concluded, in part, that inherent differences preclude public and private shipyards from competing on an equal footing. We noted, however, that the Navy had taken steps to ensure that public and private shipyards be treated as equitably as possible. At that time, only a few overhauls and repairs had been completed. In response to a request from your office, we reviewed the current status of the shipyard competition program. This report summarizes the results of that work.

Results in Brief

The public and private shipyard competition program has resulted in limited competition between public and private shipyards with both types of shipyards submitting proposals on less than half the vessels competed. In part, this is because private shipyards can price proposals below expected costs, whereas public shipyards are required to include a proportionate share of all expected costs. Additionally, the limited availability of commercial ship construction and repair work has created a highly competitive market among private shipyards resulting in relatively low price proposals. Also, only two private shipyards are capable of overhauling or repairing nuclear submarines.

The Navy believes the program has encouraged the public shipyards to adopt a more businesslike approach to ship repair work. However, the Navy's projected cost savings cannot be substantiated.

Background

Before fiscal year 1985, Navy surface ship overhauls and repairs either were assigned to public shipyards or were competed, in most cases, only

[1] Navy Maintenance: Competing Vessel Overhauls and Repairs Between Public and Private Shipyards (GAO/NSIAD-88-109, Mar. 25, 1988).

among private shipyards. Nuclear-powered vessels were allocated, sometimes without competition, to private shipyards as well as assigned to public shipyards.

In fiscal year 1985, the Congress created a program that tested the feasibility of competing two Navy ship repairs and overhauls between public and private shipyards. The program has since grown to include an estimated 40 vessels to be competed in fiscal year 1990. (See app. II.)

Program Results and Cost Growth

As of the end of fiscal year 1989, work involving 43 surface ships and 25 submarines had been competed and final costs for 55 of these vessels had been determined. Private shipyards were awarded work involving 38 surface ships, and public shipyards were awarded work involving 5 surface ships. Of the submarines competed, 21 went to public shipyards and 4 went to private shipyards. One of the four was later terminated at the private yard's request and assigned to a public shipyard. (See app. V.)

Final costs for work on the 33 surface ships and 22 submarines completed totaled $962.5 million and showed an increase of about 23 percent, or $182.3 million, over the cumulative award price of $780.2 million. Of the total increase of $182.3 million, about $69.8 million was for work in public shipyards and about $112.5 million was for work in private shipyards. In both cases, the cost growth resulted from increased costs for (1) unanticipated work requirements, (2) correction of inaccurate specifications and drawings, (3) delays in the delivery of government-furnished materials, and (4) overly optimistic proposals. (See app. III.)

Limited Competition

So far, the program has resulted in limited competition between public and private shipyards. Price proposals from both public and private shipyards were submitted for only 22 of 43 surface ships competed. Of the 21 remaining vessels, 1 was assigned to a public shipyard and only private shipyards submitted proposals on the 20 other ships.

In fiscal year 1989, private shipyards did not submit any proposals for work involving nuclear submarines, and in fiscal year 1990, these shipyards submitted proposals on two solicitations, one of which was a package for three submarine repair availabilities. For submarines to be competed during fiscal year 1991, private shipyards have indicated that

they are interested in submitting proposals for only 2 of 13 submarines to be included in the program.

Projected Cost Saving and Claimed Improvements Not Substantiated

Our earlier report concluded that the Navy's original estimate that the program resulted in cost savings of $200 million could not be substantiated. The Navy's report on the two surface ships competed in fiscal year 1985 concluded that the private shipyard costs were about 8 percent less than the public shipyard's costs. The Navy now believes that the final costs were comparable since the private shipyard, subsequently, submitted a claim and was paid for some additional costs.

Navy officials claim the program has encouraged public shipyards to adopt a more businesslike approach to ship overhauls and repairs and has reduced costs. However, they have not provided empirical evidence to support these claims. (See app. IV.)

Agency Comments

We did not obtain official agency comments. However, we discussed a draft of this report with Navy program officials and have included their comments where appropriate.

Our scope and methodology are discussed in appendix I.

We are sending copies of this report to the Chairmen, Senate Committee on Governmental Affairs, Senate and House Committees on Appropriations, and House Committees on Government Operations and on Armed Services; the Director of the Office of Management and Budget; the Secretaries of Defense and the Navy; and other interested parties.

Please contact me at (202) 275-6504 if you or your staff have any questions concerning the report. Major contributors to this report are listed in appendix VI.

Sincerely yours,

Martin M Ferber
Director, Navy Issues

Contents

Abbreviations

NAVSEA Naval Sea Systems Command

Scope and Methodology

We performed work at the offices of the Assistant Secretary of the Navy (Shipbuilding and Logistics);[1] the Naval Sea Systems Command (NAVSEA); the Commander in Chief, U.S. Atlantic Fleet, and the Supervisors of Shipbuilding, Conversion, and Repair at Bath, Maine; Groton, Connecticut; Boston, Massachusetts; Newport News, Virginia; Portsmouth, Virginia; Long Beach, California; and Seattle, Washington. We also performed work at the Norfolk Naval Shipyard, Portsmouth, Virginia; Charleston Naval Shipyard, Charleston, South Carolina; the Long Beach Naval Shipyard, Long Beach, California; the Puget Sound Naval Shipyard, Bremerton, Washington; the Newport News Shipbuilding and Drydock Company, Newport News, Virginia; and the General Ship Corporation, Boston, Massachusetts.

We reviewed specific contracts for work that had been competed between public and private shipyards as of September 1989, to determine program results. We analyzed current financial data on those contracts to determine the amount of cost growth as of December 31, 1989. For work completed by public shipyards, we compared award prices with actual shipyard costs. For work completed by private shipyards, we compared contract award prices with final contract prices. If the final contract prices had not been negotiated, we compared contract award prices to the Navy's estimate of the final contract prices. Furthermore, we reviewed contract files and interviewed public shipyard and Navy officials to document the (1) causes for cost growth, (2) extent of cost savings, and (3) additional costs of the program. In conducting this review, we used the same accounting systems, reports, and statistics that the Navy uses to monitor the competition program. We did not independently determine their reliability.

Navy officials reviewed a draft of this report, and we have incorporated their comments where appropriate. Our review was performed from February 1989 through May 1990 in accordance with generally accepted government auditing standards.

[1]This office is now referred to as Research, Development, and Acquisition.

Background

In the early 1970s, the Congress limited the amount of funds for alterations, overhauls, and repairs of naval vessels that should be done in public shipyards to a percentage of the total amount appropriated for such purposes. In fiscal year 1985, it also initiated a program to test competing a portion of that work between public and private shipyards.

Initiating Competition

Beginning in fiscal year 1974, the Congress placed a 70-percent ceiling on appropriations for all alterations, overhauls, and repairs of naval vessels that could be reserved exclusively for public shipyards. Current legislation contains no such restriction.

In fiscal year 1985, the Congress created a program to test acquiring naval vessel overhauls and repairs through competition between public and private shipyards. Although this legislation did not earmark amounts available for competitive purposes, it made funds available that year for two or more ships to be placed in the test and stated that:

"The Secretary of the Navy shall certify, prior to the award of a contract under this test, that the successful bid includes comparable estimates of all direct and indirect costs for both public and private shipyards."

NAVSEA devised its plan for conducting the test of competition so that each sector would overhaul one ship. The Navy's competitive test involved the regular overhauls of the USS Duluth (LPD 6) and the USS Cleveland (LPD 7), which were homeported on the west coast and had comparable work packages and overhaul schedules. Under the plan, NAVSEA issued a solicitation for the USS Duluth to both public and private shipyards on the west coast. A fixed-price incentive contract was awarded to Northwest Marine Iron Works of Portland, Oregon, which was the lowest priced, technically qualified private sector offeror. NAVSEA then assigned the USS Cleveland to the lowest priced, technically qualified public sector offeror — Long Beach Naval Shipyard. The results of the test were published by the Navy in fiscal year 1987 and are discussed in detail in appendix IV.

In legislation for fiscal year 1986, the Congress continued the program, authorizing competition for work involving at least four ships. The number of ships was not specified for fiscal year 1987 or 1988. However, the conference report on the Defense Department's appropriations for fiscal year 1989 required that four naval vessel upgrades be included in that fiscal year's program. Table II.1 shows the number of

ships included in the competition program each fiscal year and the percentage of the ship maintenance and modernization budget the work represented.

Table II.1: Vessels in the Program and the Percentage of the Ship Maintenance and Modernization Budget Represented

Fiscal year	No. of ships	Percent of budget
1985	1[a]	[b]
1986	12	10.5
1987	15	9.6
1988	19	4.6
1989	21	10.8
1990 (est.)	40	13.1

[a]The other vessel in the test was assigned to the lowest priced, technically qualified public sector offeror.

[b]Less than 1 percent.

Program Implementation

NAVSEA implements the program, issues project orders to public shipyards for competed work, and manages the eight public shipyards. NAVSEA and the Supervisors of Shipbuilding, Conversion, and Repair award contracts to private shipyards. The Commanders in Chief, U.S. Atlantic and Pacific Fleets, also issue project orders. The Navy Comptroller issues pricing guidance to the public shipyards for the competition program.

In performing its responsibilities, NAVSEA nominates each vessel to be competed and sends a solicitation to public and private shipyards qualified to perform the work. After evaluating proposals, NAVSEA performs a comparability analysis on the apparently lowest priced, technically acceptable proposal received from a public and private shipyard. This analysis is the Navy's basis for certifying to the Congress that the successful proposal includes comparable estimates of all direct and indirect costs. NAVSEA, in its analysis, adds certain costs, such as those for military personnel and the services of the Navy's Supervisors of Shipbuilding, Conversion, and Repair, which are not funded by either public or private shipyards. If a public shipyard's proposal is the lowest, NAVSEA also performs a cost analysis to determine if the proposed amount reflects reasonable and realistic costs. Awards are made based on the lowest evaluated price for technically acceptable proposals.

Program Results

The Navy has competed overhaul and repair work for 68 vessels since the program's inception through the end of fiscal year 1989. Private shipyards were awarded work on most of the surface vessels, and public shipyards were awarded work on most of the submarines. Final costs to the government for work on 55 vessels completed as of that date were $182.3 million more than the cumulative award price of $780.2 million.

Ships Competed

The distribution of competed overhaul and repair work is shown in table III.1.

Table III.1: Distribution of Overhaul and Repair Work Between Public and Private Shipyards From Fiscal Years 1985 Through 1989

Shipyard	Submarines	Surface ships	Total
Public	21	5	**26**
Private	4[a]	38	**42[a]**
Total	**25**	**43**	**68**

[a]One submarine won by a private shipyard was subsequently terminated at that yard's request and assigned to and repaired by a public shipyard.

The ships included in the competition program, the shipyard awarded the work, and the amount of the award are shown in appendix V.

Cost Growth

Cost growth was experienced on the 55 vessels completed as of the end of fiscal year 1989. Table III.2 shows that the final cost for 23 vessels completed by public shipyards was $576.6 million, about 14 percent more than the total original job order price of $506.8 million. The final cost of 32 vessels completed by private shipyards was $385.9 million, about 41 percent more than the contract award prices of $273.4 million.

Table III.2: Cost Growth of Completed Work (Dollars in millions)

Shipyards	No. of ships	Award price	Final cost	Growth[a]	Percent of growth
Public					
Surface ships	4	$52.6	$87.4	$34.8	66.2
Submarines	19	454.2	489.2	35.0	7.7
Subtotal	**23**	**506.8**	**576.6**	**69.8**	13.8
Private					
Surface ships	29	249.0	358.6	109.6	44.0
Submarines	3	24.4	27.3	2.9	11.9
Subtotal	**32**	**273.4**	**385.9**	**112.5**	41.1
Total	**55**	**$780.2**	**$962.5**	**$182.3**	23.4

[a]Cost growth can include both growth work and new work. Growth work relates to technical shortfalls in the original estimate of work requirements, and new work pertains to requirements not included in the original scope of work.

The causes for cost growth of overhauls and repairs are discussed in a recent report, Navy Maintenance: Cost Growth and Schedule Overrun Problems Continue at The Shipyards (GAO/NSIAD-90-144, July 24, 1990). According to Navy officials, the causes include (1) work requirements not foreseen at the time the proposals were developed, (2) inaccurate specifications and drawings, (3) untimely deliveries of government-furnished material, and (4) overly optimistic bidding.

Limited Competition

The program has resulted in limited competition between public and private shipyards. One reason is that private shipyards can submit proposals to do the work for less than the expected costs. In contrast, public shipyards are required by the Navy to include a proportionate share of all expected costs. Another reason is that the limited availability of commercial ship construction and repair work has created a highly competitive market among private shipyards for work involving Navy surface ships resulting in relatively low price proposals compared to public shipyards' proposals. Additionally, only two private shipyards are capable of overhauling or repairing nuclear submarines, and they have shown limited interest in submitting proposals for that type of work. As a result, both public and private shipyards submitted proposals on less than half of the vessels competed.

Public Shipyards Now Include a Proportionate Share of All Costs

In mid-1987, NAVSEA began requiring public shipyards to include a proportionate share of all overhead costs in their price proposals to more accurately reflect the cost of accomplishing competed work. Before then, the proposals were developed using only the incremental overhead costs expected to be incurred to accomplish the competed work. Prior to that change, public shipyards had won 3 of 10 surface ships competed. Since then, public shipyards won only 1 of the 12 surface ships competed from the end of fiscal year 1987 through fiscal year 1989.

Conversely, private shipyards can propose prices below their expected costs to complete work. Current laws and NAVSEA regulations provide no basis to exclude an otherwise technically acceptable, responsible private shipyard from a competition solely on the basis that the contractor submitted an excessively low proposal. Thus, the Navy can award a contract to a shipyard if the Navy determines that the shipyard can sustain the loss and is otherwise responsible.

Further, limited commercial ship repair work in the United States results in a highly competitive market among private shipyards and, thus, lower price proposals for available Navy surface ship repair work. The results of the program show that it is difficult for public shipyards to compete for surface ships in this environment.

Limited Interest in Submarine Competition

Private shipyards did not offer any proposals for submarine repairs during fiscal year 1989. As a result, in September 1989, NAVSEA requested approval from the Assistant Secretary of the Navy for Shipbuilding and Logistics to temporarily suspend the competition program for submarines. The Assistant Secretary directed NAVSEA to continue the competition but to survey capable shipyards to determine the level of interest in competing for the proposed work. If less than two shipyards were interested or if no private shipyard was interested, NAVSEA could eliminate the competitive process and make assignments where deemed most effective.

As of May 10, 1990, NAVSEA had surveyed the private shipyards and found they had no interest in submitting proposals for eight submarines not yet competed in fiscal year 1990 and had interest in only 2 of 13 submarines to be competed during fiscal year 1991. Thus, public shipyards will likely be assigned the work.

Head-To-Head Competition on Less Than Half the Ships

Proposals from both public and private shipyards were offered on 22 surface ships and 10 submarines of the 68 vessels competed as shown by table III.3.

Table III.3: Competitions Where Both Public and Private Shipyards Offered Proposals

Type of vessel	Number of competitions	Winning shipyard	
		Public	Private
Surface ships	22	4	18
Submarines	10	9	1
Total	**32**	**13**	**19**

In addition to the USS Cleveland, which was assigned to a public shipyard as part of the test of the program, public shipyards won four surface ships when competing directly with private shipyards. Private shipyards won 18 ships on which both sectors offered contract proposals. Private shipyards won another 20 surface ships because the public shipyards did not offer contract proposals or withdrew proposals because they could not accommodate the work at that time.

Public shipyards won competitions for 9 of 10 submarines on which both sectors offered contract proposals and were assigned 8 other submarines when private shipyards did not offer price proposals. They were assigned four other submarines because no proposals or no acceptable proposals were offered by either sector. Private shipyards were awarded work involving three submarines when no public shipyard offered contract proposals. One submarine won by a private shipyard was later assigned to a public shipyard at the private shipyard's request.

Two Public Shipyards Not Participating in the Program

Of the eight public shipyards, six have participated in the program. They are Portsmouth Naval Shipyard, Philadelphia Naval Shipyard, Norfolk Naval Shipyard, Charleston Naval Shipyard, Puget Sound Naval Shipyard, and Long Beach Naval Shipyard. The two shipyards that had not competed as of fiscal year 1989 were the Pearl Harbor Naval Shipyard and the Mare Island Naval Shipyard. Navy officials said that the Pearl Harbor shipyard has not participated because it has no effective competition in Hawaii and it is noncompetitive against mainland shipyards. They also said Mare Island's heavy work load has precluded that shipyard's participation. The Philadelphia and the Long Beach shipyards are not qualified to do nuclear work. Table III.4 shows public shipyards' participation in the program.

Table III.4: Public Shipyard Participation in the Competition Program Through Fiscal Year 1989

	Public shipyards						
	Long Beach	Puget Sound	Charleston	Norfolk	Portsmouth	Philadelphia	Total
Surface ships							
No. of proposals offered	13[a]	3	1	2	0	6	**25**
No. won	4	0	0	0	0	1	**5**
No. of ships repaired	4	0	0	0	0	1	**5**
Submarines							
No. of proposals offered	0	2	6	5	8	0	**21**
No. won	0	1	5	5	6	0	**17**
No. of submarines repaired	0	1	8	7	6	0	**22**

[a]Includes a proposal the Long Beach shipyard prepared on the USS Cleveland after being assigned the ship as part of the original test

In only two instances did more than one public shipyard offer a proposal on the same surface vessel. Public shipyards capable of doing nuclear work offered six contract proposals on surface ships but did not win any of those competitions. In only two instances did more than one public shipyard offer contract proposals on the same submarine.

Agency Comments and Our Evaluation

In commenting on a draft of this report, Navy program officials stated that much of the difference between the award price and the final cost is related to new work resulting from (1) "open and inspect" repairs when the full scope of repairs and price cannot be determined until after the systems have been opened and their condition is determined or (2) the addition of alterations or other new work items after the contract has been awarded. In addition, these officials said that some cost growth is not necessarily bad. They asserted that the award price is driven primarily by competition and market pressures and the resultant proposals may not be reflective of the basic work package or the Navy's initial predicted end cost. They added that the Navy gets the initial work at a lower rate because of competition but gets subsequent work at a premium price rate because it is then negotiating in a sole-source environment. On balance, they believe the overall costs for the work are fairly close to what the Navy predicted. Thus, the Navy obtains greater value for maintenance dollars spent. The Navy believes a more balanced approach would be to evaluate the predicted end cost against the final contract cost.

We agree that the difference between the award price and the final cost results, in part, from both (1) growth in the original scope of work and (2) new work. Our intent was to show that the difference can be significant; for example, the difference was over 23 percent for the vessels included in the scope of this review.

Projected Cost Savings Not Substantiated

We could not substantiate the Navy's original estimate that the competition program has resulted in a cost saving of $200 million. Also, not all costs resulting from the competition program were included in the Navy's estimate. The Navy's report on the results of a fiscal year 1985 two-ship test competition concluded that the private shipyard's price to repair the USS Duluth was about 8 percent less than the public shipyard's price to repair the USS Cleveland. The Navy now believes that the final prices were comparable. The Navy believes there have been other program benefits but does not have any analyses that directly link savings with the competition program.

Original $200 Million Projected Cost Savings

In March 1987, the Navy claimed an estimated savings of $200 million from the competition program. This projected savings was based on an estimated $150 million savings from the overhaul of five submarines and $50 million in savings from the overhaul of six surface ships. Different methodologies were used for the two types of vessels because, according to Navy officials, submarine work packages are better defined and historically have been more consistent than surface ship work packages.

Now that the ships have completed repairs, we found that cost growth of $55.6 million on the six surface ships canceled the projected cost savings of $50 million. The cost growth of $89.9 million experienced on the five submarines substantially reduced the projected savings on those vessels. Also, the Navy's methodology used to estimate the savings for submarine-related work attributed all savings to the program without considering the impact of the Navy's other cost reduction efforts that may have created savings in public shipyards during this period. The analysis also did not consider costs associated with implementing the program. The analysis excluded the costs of evaluating proposals, awarding the contract or project orders, performing a comparability analysis on the lowest priced proposals from a public and a private shipyard, certifying to the Congress that the successful proposal included comparable estimates of all direct and indirect costs, and developing the public shipyard's initial proposal.

According to a public shipyard official, a shipyard expends between $60,000 and $75,000 to develop a proposal for less complex projects and between $150,000 and $250,000 for more complex proposals. Another public shipyard official said that the preparation of a proposal costs over $185,000. From fiscal years 1985 through 1989, public shipyards

submitted 24 unsuccessful proposals. Significant headquarters and shipyard personnel resources were involved in preparing, submitting, and evaluating necessary documentation that produced no significant cost savings and actually deprived shipyards of needed planning time.

Reported Test Results

In fiscal year 1985, the Congress authorized a test competition to evaluate the possibility of public and private shipyards competing for repair and overhaul work. In November 1987, the Secretary of the Navy reported the results to the Chairman, Senate Subcommittee on Defense, Committee on Appropriations.[1] The report stated that the quality and the schedule performance of the two shipyards performing the overhauls were satisfactory. The report also stated that the two overhauls were not exactly identical in scope, though the work was similar. The scope of work at the public shipyard was about 8 percent larger than that done by the private shipyard. Thus, the report concluded that the private shipyard performed work for about 8 percent less than the public shipyard after a government estimate was used as a normalizing factor to account for the difference in work scope.

This evaluation was made before a $6.4 million claim filed by the private shipyard was settled. The claim was settled for $2.7 million in December 1988. A NAVSEA official stated that the Navy now believes the costs to the government were comparable for both shipyards after considering the private shipyard's increased price. Further, another Navy representative stated that the private shipyard's costs actually exceeded the price the government paid by about $3.7 million. The contractual ceiling price prevented the shipyard from recovering the additional costs from the Navy.

Current Navy Position on the Competition Program

In a hearing before the House Armed Services Committee in March 1989, a Navy official said that the program had paid the following dividends:

- The public shipyards had developed a more businesslike approach to the ship repair business. There had been improvements in the overall estimating process as well as more discipline in identifying new work and growth in the work package itself.

[1] Public Private Sector Overhaul Competition Final Report, August 31, 1987, Department of the Navy, NAVSEA, Washington, D.C.

- In the instances where true public/private competition existed (e.g., more than one proposal was received), the early nuclear ballistic submarines and surface ship availabilities did show reduced costs.
- As a result of the move toward competition and increased cost efficiencies, the naval shipyards had placed stronger emphasis on "state-of-the-art" management and technical processes.

While these may be valid observations, the Navy has not substantiated that the program has directly resulted in major improvements and costs reductions.

Agency Comments and Our Evaluation

Navy program officials restated their belief that the competition program has resulted in cost savings. They cited as an example, the reduction in the cost to complete nuclear ballistic submarine overhauls since the inception of competition. They also noted that two of the most active public shipyards in the competition program have made significant improvements as a result of the program.

We agree that the program has encouraged public shipyards to adopt a more businesslike approach to ship overhaul and repair work. However, since the inception of the program, many management and technical initiatives have been undertaken to improve the efficiency of public shipyards. Also, as we pointed out in another report on the program, officials at one of the public shipyards that has been actively involved in overhauling nuclear ballistic submarines believed that their experience with that type of work had enabled them to estimate the scope and cost of work more accurately. Therefore, we do not believe it is appropriate to directly attribute all cost reductions to the competition program.

List of Ships Competed Fiscal Years 1985 Through 1989

Dollars in millions

Name (USS)/Hull No.	Successful offeror	Amount	
		Private	Public
Surface ships			
Duluth (LPD 6)	Northwest Marine Iron Works	$12 3	
Cleveland (LPD 7)	Long Beach Naval Shipyard		$23 8
Jarrett (FFG 33)	Long Beach Naval Shipyard		1 6
L Y Spear (AS 36)	Norfolk Shipbuilding and Drydock Corp	18 4	
Fort Fisher (LSD 40)	Lockport Marine Co	15 4	
Mahan (DDG 42)	Metro Machine Corp	13 8	
Albert David (FF 1050)	National Steel & Shipbuilding Co	14 6	
O'Callahan (FF 1051)	Todd Pacific Shipyards Corp	16 6	
John A Moore (FFG 19)	Southwest Marine, Inc	6 0	
Clifton Sprague (FFG 16)	Philadelphia Naval Shipyard		4 5
Fletcher (DD 992)	Long Beach Naval Shipyard		22 7
Farragut (DDG 37)	Norfolk Shipbuilding and Drydock Corp	2 5	
Paul F Foster (DD 964)	Northwest Marine Iron Works	26 4	
Santa Barbara (AE 28)	Metal Trades, Inc	2 2	
Brumby (FF 1044)	Bath Iron Works Corp	14 5	
Coontz (DDG 40)	Metro Machine Corp	1 6	
Trippe (FF 1075)	General Ship Corp	8 8	
Prairie (AD 15)	Southwest Marine, Inc	7 2	
A W Radford (DD 968)	Avondale Industries, Inc	20 8	
Bowen (FF 1079)	Metro Machine Corp	6 9	
Knox (FF 1052)	Southwest Marine, Inc	8 1	
Stein (FF 1065)	Southwest Marine, Inc	9 1	
Crommelin (FFG 37)	Todd Pacific Shipyards Corp	4 3	
Estocin (FFG 15)	Philly Ship	3 8	
Robert E Peary (FF 1073)	Honolulu Shipyard	1 5	
Harold E Holt (FF 1074)	Marisco Limited	1 9	
Ouellet (FF 1077)	Honolulu Shipyard	1 7	
Caron (DD 970)	Avondale Industries, Inc	18 9	
John Hancock (DD 981)	Ingalls Shipbuilding Div , Litton Industries	17 8	
Vreeland (FF 1068)	Metro Machine Corp	6 5	
Halsey (CG 23)	Continental Maritime, Inc	27 9	
Fox (CG 33)	National Steel and Shipbuilding Co	34 4	
O'Brien (DD 975)	Southwest Marine, Inc	22 0	
Callaghan (DDG 994)	Long Beach Naval Shipyard		25 3
Chandler (DDG 996)	Todd Pacific Shipyards Corp	26 7	
Reasoner (FF 1063)	National Steel and Shipbuilding Co	7 9	

(continued)

Name (USS)/Hull No.	Successful offeror	Amount	
		Private	Public
Surface ships			
Kirk (FF 1087)	Todd Pacific Shipyards Corp.	9.3	
Oliver Perry (FFG 7)	General Ship Corp.	10.2	
Estocin (FFG 15)	Metro Machine Corp.	8.1	
Emory S. Land (AS 39)	Norfolk Shipbuilding & Drydock Corp.	11.4	
Clifton Sprague (FFG 16)	G. Marine Diesel	2.5	
Badger (FF 1071)	Marisco Limited	2.3	
Vandergrift (FFG 48)	Southwest Marine	1.9	
Total		**426.2**	**77.9**
Submarines			
Benjamin Franklin (SSBN 640)	Charleston Naval Shipyard		112.0
George Bancroft (SSBN 643)	Charleston Naval Shipyard		112.2
Layfayette (SSBN 616)	Portsmouth Naval Shipyard		6.4
Augusta (SSN 710)	Portsmouth Naval Shipyard		5.7
Woodrow Wilson (SSBN 624)	Charleston Naval Shipyard		120.9
Kamehameha (SSBN 642)	Portsmouth Naval Shipyard		112.1
Alexander Hamilton (SSBN 617)	Puget Sound Naval Shipyard		110.7
Corpus Christi (SSN 705)	Portsmouth Naval Shipyard		6.4
Lapon (SSN 661)	Norfolk Naval Shipyard		2.7
Norfolk (SSN 714)	Norfolk Naval Shipyard		3.0
Providence (SSN 719)	General Dynamics Corp., Electric Boat Division	6.1	
Albuquerque (SSN 706)	Portsmouth Naval Shipyard		6.0
Philadelphia (SSN 690)	Portsmouth Naval Shipyard		5.4
Henry Clay (SSBN 625)	Charleston Naval Shipyard		9.7
Lewis & Clark [a] (SSBN 644)	Newport News Shipbuilding[a] and Drydock Company	10.8[a]	
George C. Marshall (SSBN 654)	Newport News Shipbuilding and Drydock Company	11.2	
John Marshall (SSN 611)	Norfolk Naval Shipyard		10.4
Baton Rouge (SSN 689)	Norfolk Naval Shipyard		5.5
Memphis (SSN 691)	Norfolk Naval Shipyard		8.5
Pittsburgh (SSN 720)	Newport News Shipbuilding and Drydock Company	7.1	
Henry L. Stimson (SSBN 655)	Charleston Naval Shipyard		10.1
Mariano G. Vallejo (SSBN 658)	Charleston Naval Shipyard		9.6
Pargo (SSN 650)	Charleston Naval Shipyard		9.5
Cincinnati (SSN 693)	Norfolk Naval Shipyard		9.3
Minneapolis/St. Paul (SSN 708)	Norfolk Naval Shipyard		9.6
Total		**35.2**	**685.7**
Total		**$461.4**	**$763.6**

[a]The private shipyard requested that this availability be terminated. The availability was then assigned to and repaired by a public shipyard.

Major Contributors to This Report

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